

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A radiation focussing element at least one surface of which is provided with at least one diffraction grating that is distorted substantially according to a quadratic function.
2. (Original) A focussing element according to claim 1 wherein the focussing element comprises a radiation reflector providing said surface.
3. (Original) A focussing element according to claim 1 wherein the focussing element comprises a radiation transmissive lens providing said surface.
4. (Original) A focussing element according to claim 3 wherein only one surface of the lens is provided with a said grating.
5. (Currently Amended) A focussing element according to claim 3 or claim 4 wherein the dispersion inherent in the grating is reduced by the lens itself, or by one or more refractive element(s) thereof.
6. (Currently Amended) A focussing element according to ~~any preceding~~ claim 1 wherein the grating is a phase grating.
7. (Currently Amended) A focussing element according to ~~any one of claims~~ claim 1 to 5 wherein the grating is an amplitude grating.
8. (Currently Amended) A focussing element according to ~~any one of claims~~ claim 1 to 7 wherein the grating is provided in a layer covering at least part of said surface.
9. (Original) A focussing element according to claim 8 wherein said layer is made of a glassy composition.

10. (Currently Amended) A focussing element according to claim 7 and claim 8 wherein said layer is made of a radiation obscuring material.

11. (Currently Amended) A focussing element according to any one of claims claim 8 to 10 wherein said layer is shaped.

12. (Original) A focussing element according to claim 2 wherein the reflector comprises a reflective layer on a substrate, and said reflective layer is shaped to provide said grating.

13. (Currently Amended) A focussing element according to any one of claims claim 1 to 6 wherein the grating is provided in the surface of the bulk element itself.

14. (Currently Amended) A focussing element according to any preceding claim 1 and further comprising a mask on at least one surface of the element to provide an aperture.

15. (Original) A focussing element according to claim 14 wherein a said mask is provided in a layer on a surface of the focussing element.

16. (Currently Amended) A focussing element according to claim 14 or claim 15 wherein said mask and said grating are provided on the same surface of the focussing element.

17. (Currently Amended) A transmissive focussing element according to claim 14 or claim 15 wherein said mask and said grating are provided on the opposed surfaces of the focussing element.

18. (Currently Amended) A radiation focussing element according to any preceding claim 1 for use with optical radiation.

19. (Currently Amended) A method of making an element according to any one of claims claim 11 to 13 wherein the grating is formed by embossing.

20. (Currently Amended) A method of making an optical element according to claim 11 or ~~claim 12~~ wherein the grating is formed by selective etching.

21. (Original) A method of making an optical element according to claim 6 wherein the focussing element is a transmissive lens and the grating is formed by moulding during manufacture of the lens.

22. (Currently Amended) A three-dimensional imaging system comprising an element according to ~~any one of claims~~claim 1 to 16.

23. (Currently Amended) A wavefront sensor comprising an optical element according to ~~any one of claims~~claim 1 to 16.